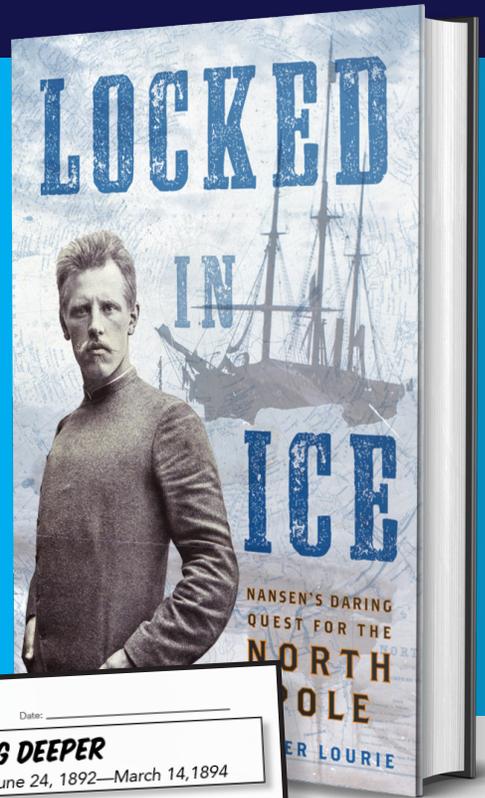


COMPLETE BOOK GUIDE

LOCKED IN ICE

The true story of Nansen's crazy quest
to The Top of the World



- STUDENT ACTIVITIES**
- DISCUSSION QUESTIONS**
- REFLECTION PROMPTS**
- VOCABULARY BUILDERS**
- WHAT IF? EXERCISES**
- AND MORE!**

Name: _____ Date: _____

EXPLORING DEEPER

Part Two: The Journey North. June 24, 1892—March 14, 1894

Match Up
Write the letter corresponding with the definition on the line in front of the word it matches.

1. Slackening
2. Bouts
3. Soldering
4. Plagued
5. Harpoon
6. Helsing
7. Asunder
8. Plaintive

Short Answer
What was the primary purpose of the Fram's expedition?

Long Answer
Nansen was a man of science. He was the first to make observations and measurements of the Arctic region.

WHAT IF...
If you were Nansen, what food would you bring on the expedition?

Locked In Ice

Name: _____ Date: _____

DICTIONARY DETECTIVE

Part 1: Fridtjof Nansen and His Dream. 1861—1893

Which Word?
Using the glossary or a dictionary, find the definition for the words listed below.

Expedition
Definition: _____

Zoology
Definition: _____

Scurvy
Definition: _____

Jeanette Current
Definition: _____

Meteorological
Definition: _____

Astronomical
Definition: _____

Cleave
Definition: _____

Flamboyant
Definition: _____

Locked In Ice

Name: _____ Date: _____

CHAPTER SUMMARY

1. If you had to give a different title to this section of this book, what would it be? Why?

2. Write a short summary of what happened in this chapter.

3. What is your favorite part of this section?

4. What's one new word you learned in this chapter? Provide the context of the word as well as a definition in your own words.

5. Draw a picture of something you think represents these chapters.

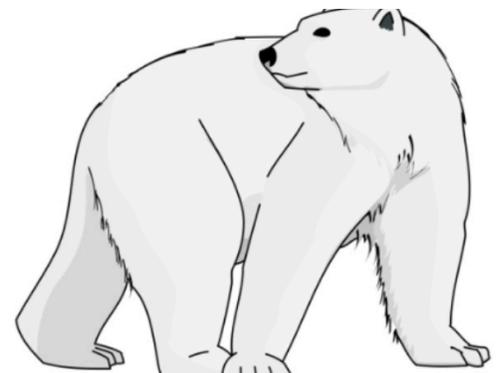
Locked In Ice

A COMPLETE NON-FICTION
BOOK STUDY FOR GRADES 5-8

DESIGNED TO COMMON CORE STANDARDS BY **STICK X STICK**

CONTENTS

Teacher Discussion Questions	A3-A6	Book Wrap-Up	61-63
Student Book Study Cover	1	Group Exercise About The	64
About The Author	2	Common Core Breakdown	68-70
About The Book	3		
About The Journey	4		
Student Exercises Part One	5		
—Dictionary Detective	6		
—Exploring Deeper	7		
—Chapter Summary	8		
Part Two	9-12		
Part Three	13-16		
Part Four	17-20		
Part Five	21-24		
Part Six	25-28		
Part Seven	29-32		
Part Eight	33-36		
Part Nine	37-40		
Part Ten	41-44		
Part Eleven	45-48		
Part Twelve	49-52		
Part Thirteen	53-56		
Part Fourteen	57-60		



DISCUSSION QUESTIONS

Introduction

1. Based on the title and cover image ask, what background knowledge are you bringing to this text that may support your understanding.
 - You can further prompt with - what have you read, seen, or done that will support your comprehension?
2. After reading the introduction, what predictions do you have about the story?
3. After reading the introduction discuss some key geographic concepts that appear in this part with students.
 - Find Norway, the Arctic Ocean, Siberia, and the North Pole on a map.
 - Discuss the concept of nautical miles. Compare the distance to yards or meters.

Part One: Fridtjof Nansen and His Dream. (*Book Pages 3-34*)

1. Who seems to be the audience of the text?
 - You can further prompt with - who wants or needs to know the information presented in this book?
 - Why do you think this is the audience?
 - If you cannot identify one, what makes you think there is not a specific audience?
2. Based on what you have read so far, how is the book structured?
 - How did these structural elements impact your understanding of the book?
3. Discuss some key geographic concepts that appear in this part with students.
 - Review the concepts of longitude and latitude.
 - Define archipelago.
 - Show students images of fjords. Discuss the geologic formation of fjords.
 - Find Greenland, Mary Murray Island, India, the Bering Sea, Wrangel Island, Alaska, Iceland, and Spitsbergen on a map.

Part Two: The Journey North. (Pages 35-74)

1. Discuss some key geographic concepts that appear in this part with students.
 - Find Lysaker Bay, Franz Josef Land, Svalbard, and Cape Fligely Rudolf Island on a map.
 - Have students begin to create their own map to follow the journey north.
 - Talk about the Arctic and where the Arctic Circle is located. Use the glossary to support this conversation.
 - Discuss the importance of cartography and the job of being a cartographer.
2. Why did Lourie include direct excerpts from Nansen's writing in Locked in Ice ?
3. How did Nansen decide upon Johansen as his companion for the trip attempting to reach the North Pole?

Part Three: Outfitting For A Two-Man Dash. (Pages 65-88)

1. Discuss some key geographic concepts that appear in this part with students.
 - Review the navigational tools theodolite, sextant, and azimuth compass.
2. Discuss some of the dangers of Arctic travel and challenges the men may face in the journey ahead. What is Nansen doing to prepare for survival in the face of these challenges?

Part Four: Onto The Ice. (Pages 89-112)

1. As you read this part, discuss why it was important for Nansen to be a mathematician, scientist, and inventor. Then ask the students to use their own mathematical knowledge and scientific observational skills in a variety of ways.
 - Compare temperatures in Celsius and Fahrenheit. Discuss the general C to F conversion equation $((x \times 9) / 5) + 32$ as well as the specific case of -40 degrees.
 - Nansen and Johansen traveled 7 miles that first day. When they left the Fram they were 360 nautical miles from the pole. At this pace how long would it take them to reach their destination? What about if they were traveling the average of 9 miles per day? Would they make it in the 30 days Nansen hoped? How about the 50 he had allowed for?
 - In this part, the duo lost the sledgometer and could no longer measure the distance traveled. Why is this significant?
 - Why is the watch an essential tool on the journey?

Part 5: Turning South. (Pages 113-126)

1. What new dangers did the men face as the seasons changed and the temperatures began to warm?
2. What factors are compelling the men to move faster? How did they lighten their load to increase their pace?

Part Six: To The Kayaks. (Pages 127-140)

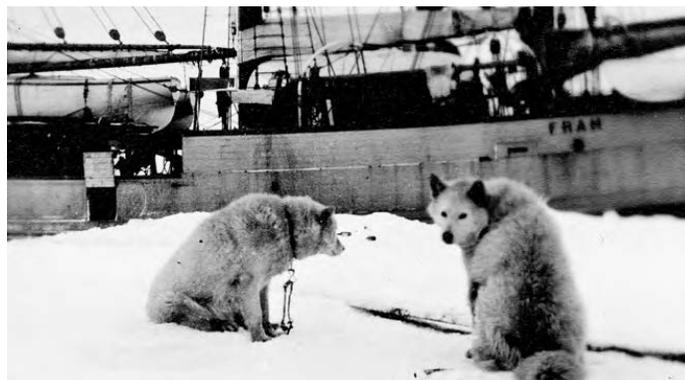
1. Discuss some key geographic concepts that appear throughout this part with students.
 - a. Identify the oceans and seas in the Arctic region.
2. On page 129, Lurie writes "Sometimes, with Herculean strength, he lifted the front end of the sled to turn it in a new direction in the heavy snow."
 - a. Discuss the use of allusions in literature.
 - b. What is this an allusion to?
 - c. Why do authors use allusions in their writing?
3. How did Lurie know that when Nansen wrote "I lie awake at night by the hour racking my brain to find a way out of our difficulties, well, well, there will be one eventually!" that he was thinking of death?
 - a. Discuss inferencing.
4. Incorporate study of measurement. How much is an ounce? Imagine eating an ounce of butter on bread to survive for 35 to 40 days. Share a snack as a class!

Part Seven: Land At Last. (Pages 141-152)

1. Discuss some key geographic concepts that appear in this part with students.
 - a. Find Eva-Liv Island on a map.
2. Why do seals and walruses float? Discuss scientific principles of floatation

Part Eight: Franz Josef Land. (Pages 153-164)

1. Discuss some key geographic concepts that appear in this part with students.
 - a. Find Eira Harbor on a map.
2. Consider having students begin an outside research project on other explorers mentioned in the book.
 - a. Frederick George Jackson
 - b. Sir Ernest Shackleton
 - c. Benjamin Leigh Smith
 - d. Henrik Mohn
 - e. Salomon August Andree
 - f. Robert Falcon Scott
 - g. Dr. Frederick A. Cook
 - h. Rear Admiral Robert E. Peary
 - i. Matthew Henon
 - j. Ronald Amundsen



Part Nine: Polar Night. (Pages 165-176)

1. There are basalt cliffs behind the hut. Discuss basalt and how it is formed. Share pictures of basalt cliffs with students.
2. Discuss the mythology and science behind the northern lights with students. Be sure to share photographs and video clips.
3. Discuss the science behind the winter solstice as well as its cultural importance.
4. Share some of the sentences in this part that evoke strong senses and bring to mind vivid images. Ask students to visualize and draw what they see.
 - a. *"The two men saw the sun for the last time that year, as the bears came to gnaw on the meat and blubber on the roof of the hut."* (pg. 166)
 - b. *"Days passed without either man stepping outside except to go to the bathroom or fetch freshwater ice, which they melted in a pot over one of the lamps for drinking water."* (pg. 167)
 - c. *"Sometimes Nansen imagined these frozen walls were marble hallways."* (pg. 167)

Part Ten: Preparing to Move Again. (Pages 177-186)

1. Discuss some key geographic concepts that appear in this part with students.
 - a. Find Tromso and the Siberian Coast on a map.
2. Discuss the interpersonal challenge Nansen and Johansen addressed in the book. Use this as an opportunity to talk to students about effective communication and problem solving strategies.

Part Eleven: The Journey Southward. (Pages 187-200)

1. Discuss some key geographic concepts that appear in this part with students.
 - a. Find Giles Land on a map.
2. Nansen demonstrated a balanced nature when he was patient with his own body and that of Johansen even as they are pushing onward and persevering. Discuss some thing you need to build stamina to do in your own life. How do you maintain balance in your life?

Part Twelve: Rescue. (Pages 201-212)

1. Discuss some key geographic concepts that appear in this part with students.
 - a. Find Cape Flora and Northbrook Island on a map.
2. Practice empathy. Put yourself in Nansen and Johansen's shoes. After three years on this journey, how would you feel if you thought you heard dogs barking?

Part Thirteen: Norway. (Pages 213-220)

1. Discuss some key geographic concepts that appear in this part with students.
 - a. Find Vardo on a map
2. Why did Nansen have to change most of the scientific recordings he had kept from the two-man dash?

Part Fourteen: Home. (Pages 221-234)

1. In this section there are a number of reunions or homecomings. Discuss the feeling of coming home
 - a. Nansen and the crew are greeted with a celebration throughout Norway. Why does he wonder what they had accomplished? Why do they owe Norway their gratitude?
 - b. Why does Lourie write that the sea seemed to whisper "Now you are home."?
2. Discuss key geographic concepts that appear in this part with students.
 - a. Find Hammerfest and Danes Island on a map.
 - b. Observe the map showing the route of the Fram.

Epilogue and Appendix. (Pages 235-308)

1. Discuss some key geographic concepts that appear in this part with students.
 - a. Discuss the Northeast Passage and Northwest Passage as you read the timeline of North Pole Expeditions and Records on pages 281 - 284.
2. Why did Lourie include photographs, lithographs, and sketches in *Locked in Ice*? How can we gather information from the various images in the book?
3. Why is this story important and relevant today?